DOCUMENT RESUME

ED 259 140 CE 041 813

AUTHOR O'Neill, Edmund J.
TITLE A Study of Student Recruitment and Selection for Area Vocational Technical Schools in Pennsylvania and Selected Vocational Educators' Opinions Concerning the Process.
PUB DATE Aug 85
NOTE 94p.; Ed.D. dissertation, Pennsylvania State University.
PUB TYPE Dissertations/Theses - Doctoral Dissertations (041) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Administrator Attitudes; *Admission Criteria; Comparative Analysis; Counselor Attitudes; Demography; Educational Practices; Questionnaires; *Regional Schools; Secondary Education; State Surveys; *Statewide Planning; *Student Recruitment; Vocational Directors; *Vocational Education; *Vocational Schools
IDENTIFIERS *Pennsylvania

ABSTRACT

A study examined current student recruitment and selection processes in area vocational-technical schools (AVTSs) throughout Pennsylvania and also compared the attitudes of vocational directors and counselors regarding these processes. Of the 170 questionnaires mailed to AVTS directors and counselors, 151 usable responses were returned. Data from the questionnaires indicated significant variations in the methods used by individual AVTSs for recruiting and selecting students. The directors surveyed believed that visitations by junior high school students to the AVTS and good working relationships with sending school personnel were major strengths in the recruitment and selection process. "Protectionism" and negative attitudes on the part of sending schools were viewed as major difficulties in the recruitment process. Whereas directors and counselors agreed that junior high students are neither knowledgeable enough about careers nor mature enough to make appropriate career decisions, they disagreed regarding the effectiveness of criteria for predicting success in and completion of vocational programs. Demographic differences among the respondents did not appear to influence their attitudes. (Appendixes to this report include the questionnaire and lists of vocational courses most and least requested by prospective students as reported by AVTS directors.) (MN)

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The Pennsylvania State University

The Graduate School

Division of Occupational and Vocational Studies

A Study of Student Recruitment and Selection for Area Vocational Technical Schools in Pennsylvania and Selected Vocational Educators' Opinions Concerning the Process

A Thesis in

Vocational Education

by

Edmund J. O'Neill

Submitted in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Education

August 1985

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ABSTRACT

The purpose of this study was to determine the prevailing mood as to whom could best benefit from vocational education programs in Pennsylvania by examining student recruitment and selection processes in area vocational technical schools and the opinions of vocational directors and counselors concerning the processes. The opinions of directors and counselors were compared based on their roles in the schools. An analysis of directors' opinions was made based on characteristics of the schools. The opinions of directors and counselors also were compared based on demographic factors.

A questionnaire was developed to collect information on characteristics of the schools, procedures used by the schools in student recruitment and selection, opinions of vocational directors and counselors, and demographic data on respondents. Usable returns were received from 151 of the 170 subjects who were sent the questionnaire. Major findings of the study were:

1. There were variations in the methods used by area vocational technical schools in Pennsylvania to recruit and select students.

2. Directors believed that visitations by junior high school students to the AVTS and good working relationships with sending school personnel were major strengths in the recruitment and selection process.

3. Directors believed that sending school "protectionism" and negative attitudes toward vocational education were major difficulties in the recruitment and selection process.

4. A majority of directors and counselors believed that students in junior high school are neither knowledgeable enough about careers nor mature enough to make appropriate career decisions.

5. There was disagreement between directors and counselors regarding the effectiveness of criteria for predicting success in and completion of vocational programs.

6. There were significant differences between directors and counselors in their stated opinions concerning student recruitment and selection.

7. There were significant differences among directors in their stated opinions concerning student recruitment and selection based on who selects students.

8. There were no significant differences among directors and counselors in their stated opinions concerning student recruitment and selection based on demographic factors.

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ACKNOWLEDGMENTS

The researcher extends his sincere thanks to the members of his doctoral committee: Dr. Thomas E. Long, Dr. Twyla M Shear, Dr. Stanley B. Baker, and Dr. James H. Mortensen. The impetus and motivation to begin and complete this thesis were provided, to a great extent, by these committee members. Appreciation is also expressed to the staff of the Wilkes-Barre Campus of The Pennsylvania State University who went out of their way to be helpful. The Bureau of Vocational Education, Pennsylvania Department of Education, was especially kind in providing resources necessary to complete this project. Recognition is also due to the directors and counselors who participated in this study, without whose input the project could not be completed.

A personal note of gratitude is extended to son Ed and daughters Kristen and Kerryn who gave up invaluable time and made numerous sacrifices during the course of this project. Finally, sincere appreciation is extended to Mary Woloski who, while she typed, exhibited endless patience and dedication along with many encouraging words.

Vita

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CHAPTER I

INTRODUCTION

Vocational education has experienced substantial growth in its relatively short history in the United States. Total enrollment in vocational education programs in 1969 was more than four times greater than in 1961 (Warmbrod, 1981). In 1982-83 over 395,000 students were enrolled in vocational education programs in Pennsylvania. Total expenditures (federal, state, local) for vocational programs in Pennsylvania were over $419 million during fiscal year 1983 (Pennsylvania, Department of Education, 1984, p. 60). Beginning with the Smith-Hughes Act in 1917, federal expenditures grew from $7.8 million to $713.3 million in 1984 (President is expected, 1984, p.4).

In the early days of vocational education, justification for its existence came from a need to match people and jobs. When industry and business recognized a need for workers, the task for vocational education was to establish a program to meet the need. In recent years, however, the role of vocational education has expanded beyond providing people to perform jobs. Progress in the use of natural resources and rapid technological growth now affords the opportunity to make vocational education and work integral parts of an individual's search for identity and self worth.

The history of vocational education in Pennsylvania demonstrates a commitment to both the communities it serves and the individuals enrolled in the various curricula. The outcome of vocational education programs depends, to a great extent, on an effective process of

recruiting, selecting, and placing students in appropriate curricula. This process implies both the need for making all students aware of vocational education as an option and the need to make the selection process an objective and workable one. This study will examine student recruitment and selection processes in area vocational technical schools (AVTSs) in Pennsylvania as well as opinions of directors and counselors in those schools concerning the processes. The purpose is to determine the prevailing mood as to whom could best benefit from vocational education programs. Opinion information concerning student readiness for career decision-making, the influence of others on student career decision-making, and the predictability of success in vocational programs could lead to a better understanding of student recruitment and selection as well as the problems associated with the process.

Background of the Problem

The tasks of recruiting and selecting students for AVTS programs are important considering their potential impact on both students and programs. Educators are encouraged to strive for the most efficient use of educational resources while assuring the placement of students in appropriate curricula. Public schools in Pennsylvania are normally required to admit all students residing within their jurisdiction. Students who choose a vocational curriculum, however, face the possibility of not being admitted to the program they select due to lack of space in that program. This situation is due to the greater popularity of some programs.

An additional problem currently being faced by the area schools is the decline in enrollment in certain program areas. This is due, in part, to the declining enrollment of schools in general. As sending

schools experience decreasing enrollments, the potential pool of AVTS applicants is adversely affected. This is evidenced in an article in the Scranton Tribune which stated: "An ad hoc committee of Lackawanna County Vocational-Technical School instructors has charged that participating school districts have been blocking students from vo-tech classes to keep the enrollment in the home schools" (Teachers claim, 1984, p. 3).

The Pennsylvania Department of Education does not advocate any set policy for the selection of vocational-technical students (Shellenberger, 1983), therefore, each school has the responsibility for developing its own selection policy to meet local needs. Counselors are often assigned the task of recruiting and selecting students. As specialists in the area of individual differences, counselors use standardized measures to assess student characteristics such as aptitude, interest, and achievement. These factors are usually considered in the selection process. The counselor realizes, however, the limitations of tests and the incomplete picture they provide. If student selection is based solely on test data, some students will be admitted to, or omitted from, programs who should not be so treated. The American Personnel and Guidance Association (APGA) (1982) cautioned against the use of tests alone in making decisions about individuals. In commenting on professional responsibilities for communicating test results, the APGA policy statement urges that professionals "Emphasize that test data represent just one source of information and should rarely, if ever, be used alone for decision-making" (p. 243).

In vocational choice activities, counselors are also concerned with the readiness of students for making career decisions. Students are required to select high school curricula at a time when they may not

have reached the level of maturity needed to make such a decision. Super (1963) dealt with the distinction between an awareness of the need to make a vocational choice and vocational readiness. His research indicated that awareness of the need to make a vocational choice was not a measure of readiness for realistic occupational decision-making.

Finally, counselors are guided by career development theory which considers occupational change as normal to human development. If such change is considered normal behavior throughout an individual's life, it may be unrealistic to expect an adolescent to select one career and maintain interest in it, even through the high school years. This is especially significant in view of the many changes which accompany the individual's search for a sense of identity and a sense of self.

In summary, the difficulties encountered in recruiting and selecting students for vocational programs can be many and varied. Given the resources to accommodate all interested students, AVTSs could operate an "open door" policy. Since this is not the case, selection policies must work to the benefit of students by attempting to predict satisfaction with, and success in, vocational programs thus avoiding the frustrations which develop if inappropriate curricular decisions are made.

The counselor uses many resources to help students make appropriate course selections. Testing programs are widely used throughout the schools. Testing, however, has many limitations as a predictive mechanism. Aptitude tests indicate both strength and potential, but a student with average or above aptitude will probably qualify for many programs of study. Achievement tests demonstrate academic achievement but may be limited for predicting success in a vocational program. Interest inventories, useful in career exploration, may not anticipate

the changes brought about by experience, career maturation, and development. These problems are not unique to vocational education. They are the same problems faced by all adolescents in the career decision-making process. As Isaacson (1971) pointed out,

> We are becoming more aware that for many people there will be other (in addition to late adolescence), perhaps many, crisis points where further career decisions will be made... it is no longer necessary during the last portion of the educational process, for a student to make a career commitment which ties him for all time to a specific field or job. (pp. 25-26)

Student recruitment and selection are, therefore, important both for maximum use of school resources and the optimum development of each student's potential.

Need for the Study

The increasing cost of providing vocational education dictates the need for optimum use of resources. Bottoms (1983) stated that "Because the demand for vocational and technical education will increase faster than resources, the emphasis will be on making the maximum, most effective use of every resource" (p. 10). Each year as school officials prepare budgets, they are forced to scrutinize requests and strive for dollar efficiency. Programs are reduced, or eliminated, and teachers are furloughed in an attempt to hold down operating costs.

Placement statistics often are used as evaluative tools for judging the effectiveness of vocational-technical programs. Follow-up reports which document the number of vocational graduates who secure employment as a result of their education are watched closely. The importance of placement statistics was emphasized in the Education Amendments of 1976 (United States Congress, 1976) which specified:

> "each State shall evaluate, by using data collected, wherever possible, by statistically valid sampling techniques, each

such program within the State which purports to impart entry level job skills according to the extent to which program completers and leavers---

"(i) find employment in occupations related to their training, and

"(ii) are considered by their employers to be well-trained and prepared for employment, ... (p. 2187)

In a study of the benefits of vocational education to students, Sparks (1977) concluded that vocational education is held to higher effectiveness standards than academic or general education.

Vocational educators also realize that legislation and resultant appropriations directly influence school operations. A program emphasis which is consistent with expected, and often mandated, outcomes is a common goal. This can be seen in policies regarding student selection. Pucel (1980) stated that much of the research done on this issue preceded affirmative action legislation. That legislation required AVTSs to evaluate their selection policies for possible bias toward race, sex, and the handicapped and disadvantaged. When such bias is allowed to persist, federal funds can be withheld. That issue exemplifies the striving for a balance between the needs of the individual and the needs of society. Concerning such, Ghiselli (1966) said, "...in an occupational choice what is desired is the achievement of the greatest utilization of the talents of the individual and the greatest possible efficiency of the operation of the organization" (p. 2).

Since student development is a prime responsibility of the vocational education process, this study will examine the student recruitment and selection policies of area vocational technical schools in Pennsylvania to determine the prevailing mood as to whom could best benefit from vocational education, as implied in the selection policies of the schools involved in the study. This study will also examine the

opinions of vocational directors and counselors concerning the process of recruitment and selection of students to determine if there are any areas which warrant further research or refinement. A comprehensive view of selection policies used throughout the commonwealth will be useful to schools in evaluating and refining their own policies.

Background

The present system of vocational education is a product of years of experimentation and research. Universities and governmental agencies have provided the resources needed to create, evaluate, revise, and implement this educational program.

The importance of student recruitment and selection in vocational education lies in the impact on human and other resources. That importance can be best understood by examining the role of work and the origin and development of vocational education and vocational guidance.

Role of Work

> Work - conscious effort, other than that involved in activities whose primary purpose is either coping or relaxation, aimed at producing benefits for oneself and/or for oneself and others. (Hoyt, 1975)

The role of work in the lives of individuals has been of considerable interest to researchers in all social disciplines. Tilgher (1965) traced the meaning of work from the Greeks and Romans who viewed work as a curse. The Hebrews held the same belief but added that work was also atonement for sin. Early Christians followed the Jewish tradition but also felt that the fruits of work should be shared with the less fortunate, "Thus on work, as a means to charity, there falls a ray of the divine light that streams from charity" (p. 29). Luther felt

that work is a way of serving God. Calvin extended the concept of work as being the will of God and added the notion that profit from work must be used "...to breed new profit, and so on to the end of time" (p. 58).

Schumacher (1977) stated that one of the functions of work is to give workers a chance to use and develop their faculties. He felt that in preparing young people for work, "we should prepare them to be able to distinguish between good work and bad work and encourage them not to accept the latter" (p. 61).

Green (1968) discussed the distinction between work and labor. Work, he believed, is of a higher calling and has an enduring quality to it. He contended that "man's devotion to work can be viewed as his effort to escape from futility, to escape from labor" (p. 42).

In the work environment, the needs of individuals are often given subordinate status to the needs of society. Bell (1975) described such a system when he said:

> You divide people into roles, you segment them, you specialize them. People then become subordinated within the structure so as to facilitate the greater output of goods and greater efficiency in the use of resources. (p. 44)

Super (1957) explored the various meanings attached to work. "Satisfying human relations, activities that satisfy carried on in conditions which are agreeable, and an assured livelihood, are three major desires which men seek to satisfy in work" (p. 14).

In a comprehensive treatment of work by Herzberg (1966), job satisfaction is seen as being influenced by achievement, recognition, work itself, responsibility, and advancement. His famous motivation-hygiene theory distinguishes between those job attributes which serve to prevent dissatisfaction (hygiene) and those which tend to motivate (motivation). The hygiene factors relate to the environment in which a

person performs a job while the motivation factors relate to the job itself. According to Herzberg, "...hygiene or maintenance events led to job dissatisfaction because of a need to avoid unpleasantness; the motivator events led to job satisfaction because of a need for growth or self-actualization" (p. 75).

Work, therefore, is important to individuals not only for the sustenance it can provide. Work is a potential source of satisfaction as well as a method of achieving self-actualization.

Vocational Education

Vocational education came into prominence with the industrialization of society. Prior to the industrial age, occupational training was accomplished by a system of indenture, apprentice training, or the transmission of skills from parent to offspring. With industrialization, the growing demand for workers dictated the need for training workers on a large scale.

Hawkins, Prosser, and Wright (1951) pointed out that although vocational education was employed in the Mechanics' Institutes established in the early 1800s, the first organized effort to establish a comprehensive program was the formation of the National Society for the Promotion of Industrial Education (NSPIE) in 1906. The leaders of NSPIE were instrumental in the development and passage of the 1917 Vocational Education Act (Smith-Hughes). The Society for the Promotion of Industrial Education subsequently joined forces with the Vocational Education Association in the Middle West and formed, in 1926, the American Vocational Association (AVA) which adopted the following objectives:

1) To assume and maintain active national leadership in the promotion of vocational education.

2) To render service to state or local committees in stabilizing and promoting vocational education.
3) To provide a national open forum for the discussion of all questions involved in vocational education.
4) To unite all the vocational education interests of the country through membership representative of the entire country.

(Hawkins et al.,1951, p. 74)

Legislation since the passage of the Smith-Hughes Act has expanded the role of vocational education to enable it to respond to the needs of individuals, business, and industry. The George-Deen Act of 1938 added distributive occupations to the then existing authorizations for agriculture, home economics, and trade and industrial areas. In 1946, the George-Barden Act added funds for guidance, teacher training, and research.

The 1963 Vocational Education Act provided major reforms for vocational education. Occupational categories were no longer specified, with the exception of business and office occupations. In addition to broadening the definition of vocational and technical education, the 1963 Act authorized the use of federal funds to construct buildings and purchase equipment for vocational facilities (Swanson, 1966).

The Vocational Education Amendments of 1968 emphasized the federal intent of providing greater access to vocational programs, especially for the handicapped and disadvantaged. Under this legislation, vocational guidance and career planning received increased attention (Barlow, 1977). Recent legislation for vocational education has paralleled other federal mandates in emphasizing the satisfaction of the needs of identified interest groups rather than specific categories of occupational education.

Since its inception, vocational education has demonstrated a concern for the whole individual. This concern can be seen in the

growth of vocational student organizations which emphasize character development and the attainment of citizenship skills as vital complements to job skills. Green (1977) stated the necessity for a comprehensive view of education:

> We cannot justify the educational value of any education on grounds of its utility for the world of work.... In seeking to maximize the utility of education, especially its utility for work, we shall reduce its utility, and its value will escape us. This is the educational rendering of that hoary truth, the hedonistic paradox (the elusiveness of happiness is guaranteed by our single-minded search for it). (p. 40)

In investigating the evolution of vocational education and its status in modern society, it is interesting to note the philosophy of John Dewey pertaining to vocational education. Wirth (1977) quoted a letter from Dewey to The New Republic in 1915:

> The kind of vocational education in which I am interested is not one which will 'adapt' workers to the existing industrial regime; I am not sufficiently in love with the regime for that.... The business of all who would not be educational timeservers is to resist every move in that direction, and to strive for a kind of vocational education which will first alter the existing industrial system and ultimately transform it. (p. 17)

Vocational Guidance

The growth and development of vocational guidance in the United States closely parallels that of vocational education. Beginning in the early part of the twentieth century, both movements saw the need for appropriate career decision-making by individuals.

Since vocational guidance is primarily the responsibility of the counselor in an AVTS, it is important to note the distinction between guidance and counseling. Patterson (1971) believed that the title "guidance counselor" was a contradiction in terms. Guidance, in his view, refers to the non-counseling duties of the counselor such as providing occupational information or testing (p. xv).

The Industrial Revolution transformed society with the introduction of technology and specialization of labor. The myriad of jobs which resulted required that a person choose from among the many new and complex options available. At the same time, psychologists began to explore the nature and identification of individual differences. This led to an emphasis on individual ability, interests, achievement, and other factors which are important elements in job selection or job adjustment (Nelson, 1963).

Frank Parsons, referred to as the father of guidance, began the Vocational Guidance Bureau in 1908. According to Cook (1971), Parsons conceived of guidance as "the process of analyzing an individual's attributes, analyzing the requirements of available occupations, and making the best possible match between the two" (p. 33).

Parsons (1909) established several basic principles of vocational counseling:

1) It is better to choose a vocation than merely to "hunt a job".
2) No one should choose a vocation without careful self-analysis, thorough, honest, and under guidance.
3) The youth should have a large survey of the field of vocations, and not simply drop into the convenient or accidental position.
4) Expert advice, or the advice of men who have made a careful study of men and of vocations and of the conditions of success, must be better and safer for a young man than the absence of it.
5) Putting it down on paper... is of supreme importance. (pp. VII-VIII)

Vocational guidance came into prominance with the formation of the National Vocational Guidance Association (NVGA) in 1913. The driving force behind the establishment of NVGA was the National Society for the Promotion of Industrial Education (Stephens, 1970). The same organization which inspired the growth and development of vocational education promoted the cause of vocational guidance.

The testing movement of the early twentieth century had significant impact on vocational guidance. World War I brought about the need for tests which would identify those draftees who were mentally inferior as well as those with promise for development as future officers (Shertzer & Stone, 1968).

Vocational guidance received great impetus from the Veterans Administration after World War II. Counseling centers were established in colleges and universities to provide returning servicemen with assistance in readjusting to their new environment, especially the work environment. The movement then spread to the high schools and elementary schools (Glennen, 1966).

In 1933 the United States Employment Service was established. Employment counselors, using the General Aptitude Test Battery developed and used since 1947 by that agency, aided clients in determining the types of occupations for which they were best suited. In 1964 this agency established Youth Opportunity Centers to deal with the problems faced by youth who were entering the labor market.

In recent years vocational guidance has received increased attention. Because there are many more career options available, career decision-making remains a major concern. The provision for counseling services has been incorporated into federal and state legislation dealing with employment for youth and adults. Herr (1974) cited the role of counseling in manpower programs in a report sponsored by the National Vocational Guidance Association. He explained the legislative inclusion of counseling in manpower programs such as the Manpower Development and Training Act of 1962 and the Economic Opportunity Act of 1964. He also elaborated on the emphasis given counseling in educational settings as evidenced by the Vocational Education Act of

1963 and the 1964 Title V-A of the National Defense Education Act (amended). That act provided funds for training and hiring school counselors.

In Pennsylvania counseling is recognized as a vital component of vocational education. The five year plan of the Pennsylvania Department of Education, Bureau of Vocational Education (1982a) states as one of its eight goals:

> Goal II: Design and promote models for support services that provide youth and adults with (1) vocational guidance and counseling, (2) career options, (3) job placement service, and (4) prevocational and concurrent occupations experiences. (p. 1)

Thus, the importance of vocational guidance is emphasized in the legislative process which recognizes the need for such services to help alleviate both the educational and social ills of society. Moreover, student recruitment and selection for vocational education are important if we are to prepare individuals for their role in the work society. Vocational education will fulfill its commitment to individuals only if educational resources are used to benefit the students gravitating toward its jurisdiction.

CHAPTER II

REVIEW OF THE LITERATURE

The purpose of this study was to determine the prevailing mood as to whom could best benefit from vocational education programs in Pennsylvania. The method selected to determine the prevailing mood was an examination of the recruitment and selection processes currently used in the schools and opinions of selected vocational educators concerning the processes.

Since the researcher believed that the difficulties encountered in selecting students for vocational programs are based to a large extent on the issue of individual development, the first phase of the review dealt with the concepts of career development, choice, and career readiness. The second phase of the review dealt with studies which examined various methods used by AVTSs in selecting students.

To expand the literature search, VEIN (Vocational Education Information Network) and the CBBS (Computer Based Bibliographic Search) service of The Pennsylvania State University were used.

Career Development and Choice

In the school the counselor must strive for a balance between the aims and objectives of the school and the needs, interests, and aspirations of the student. One of the competencies which the counselor should possess is an understanding of the process of career development and choice. A brief review of several theories on career development

and choice illustrates the importance of an understanding of this concept by the counselor.

Ginzberg, Ginsburg, Axelrod, and Herma (1951) conducted a study of career development based on three life stages through which individuals progress. The first stage, the fantasy period, involves experiences prior to age eleven. The second stage, the tentative period, prompts an awareness of individual interests and values. This period ends at approximately eighteen years of age. The final stage, the realistic period, has the individual more actively involved in vocational decision-making. This realistic period is not reached until approximately eighteen years of age (pp. 185-190). Ginzberg also enumerated the three basic elements of his theory on career development: 1) it is a process, 2) the process is largely irreversible, 3) compromise is an essential aspect of every choice (p. 186).

It is interesting to note that Ginzberg has modified his original theory, especially regarding the duration of the occupational choice process. Ginzberg (1970) stated of his original research:

> The process of occupational choice determination is much more elongated than... originally postulated. The process of occupational choice determination, then, is subject to alteration and change as long as the individual remains active in the world of work. (p. 64)

Super (1953) believed that career development involved a series of life stages and the development of a self-concept. His theory of career development can be summarized by the chapter headings in his 1957 work, The Psychology of Careers:

1. Adolescence as exploration: developing a self-concept
2. The transition from school to work: reality testing
3. The floundering or trial process: attempting to implement a self-concept
4. The period of establishment: the self-concept modified and implemented

5. The maintenance stage: preserving or being nagged by a self-concept
6. The years of decline: adjustment to a new self

Super's recognition of the inevitability of change can be seen in his statement, "vocational preferences... change with time and experience, making choice and adjustment a continuous process" (1953, p. 189).

Hoppock (1957) believed that people select occupations which best meet their needs and that information on self and occupations affect individual occupational choice. Concerning change, he said, "Occupational choice is always subject to change when we believe that a change will better meet our needs" (p. 77). As individuals change, he stated, so do their needs. This is significant for high school students who are experiencing substantial physical, mental, and emotional growth.

Career development is based on the connection between personality and occupational choice, according to Holland (1959). People with similar personalities will select similar occupations. How well a person adjusts to an occupation will depend on how well the work situation meets the needs of the individual's personality. Holland (1973) summarized his theory in the following four assumptions:

1) In our culture, most persons can be categorized as one of six types: realistic, investigative, artistic, social, enterprising, or conventional
2) There are six kinds of environments: (same as 1)
3) People search for environments that will let them exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles
4) A person's behavior is determined by an interaction between his personality and the characteristics of his environment. (pp. 3-4).

Roe (1956) illustrated the developmental aspect of careers when she asked what is meant by occupational choice, "Do we mean what a person would most like to do,... do we mean what he will try to do,... do we mean what he actually does come to do?" (p. 251). Roe proposed a theory

of occupational choice which, according to Isaacson (1971), had gained little support in subsequent research. Her theory is based on early childhood experiences, especially the emotional climate in the home. Roe suggested that the individual who was provided a warm, accepting environment will choose an occupation working with others. Conversely, an individual who experienced a cold, neglectful environment will seek more technical, non-people oriented occupations.

There are many theories which attempt to clarify the process of career development and career choice. Perhaps the process can be summed up by a statement from the National Vocational Guidance Association and American Vocational Association Commission on Career Guidance and Vocational Education (1973):

> In order to be whole persons, men and women naturally must engage in activities they consider to be significant. The need to make judgments about using time and assuming roles recurs throughout life. A person formulates a career by continuously evaluating both what he wants to do with his life and the actions that will enable him to achieve his personal goals. Career development occurs as educational and vocational pursuits interact with other life pursuits. It continues throughout life. (p. 3)

Student Readiness

Much of the research done on student readiness has dealt primarily with students in college preparatory curricula. McDaniels (1968) challenged the belief that students in the ninth grade are too young to make realistic career decisions. He contended that they are not too young to make choices but, rather, are only too poorly prepared to make choices. He stated that the youth of today are highly developed both physically and intellectually. Studies were cited which indicated that schools do little in the area of vocational development. What is done is mainly concerned with white collar jobs and higher education.

A study of student perceptions of occupational congruency was reported by Williams (1973). Based on Holland's theory that people select careers which reflect their personality, Williams hypothesized that students would perceive congruency with occupational types that corresponded to their personality types. The study confirmed his hypothesis for males but not for females.

Prediger, Roth, and Noeth (1973) conducted a study of 32,000 students in 8th, 9th, and 11th grades. Their purpose was to assess important aspects of the career development process. A significant finding was the sharp contrast between students' expressed need for help with career planning and the help the students believed they had received. Students believed that they did not receive the amount of help for which they had expressed a need. In this study, it appeared that students were ready to make occupational decisions but the supportive services designed to aid them in the process did not meet their expectations.

Holland and Gottfredson (1975) found that early vocational aspirations were coherent with subsequent expressed vocational choices and, therefore, had predictive ability. They further concluded that the degree of coherence provides a good indication of a person's decision-making ability.

A study by Jepsen (1975) was designed to measure the occupational decision process over the high school years. Using a population of 207 students, he found that the information search and an elaborate rationale for supporting choices were key elements in the development of occupational decision-making. These elements increased students' confidence regarding occupational choices, but not until the 12th grade.

Jepsen's data suggested that occupational decisions in high school dealt with processing information, not choosing occupational goals.

The process of career development and career choice can be a complex one. While there are many theories advanced to explain the process and many studies done to illustrate the effects, the above were selected due to their recurrence in the literature. They are presented to illustrate the importance of career development and student readiness for assistance especially for counselors who are assisting individuals in making career decisions.

Theories of career development and studies on student readiness illustrate two major difficulties in working with junior high school students who are deciding on a senior high curriculum. First, they indicate that individuals at this age may not be occupationally mature. They, therefore, may be unable to make mature and realistic educational or occupational choices. Second, change is considered a normal function of the career development process. If these propositions are reasonable and accepted, schools and school personnel should be flexible enough to allow for change. Rather than viewing change as an unnecessary disruption in the education process, it could be viewed as a normal aspect of the career development process.

Student Selection

Most studies involving student selection for vocational programs have focused on criteria which can best predict achievement or persistence in programs. In a review of studies conducted from 1921 to 1954, Patterson (1956) noted the scarcity of research dealing with the prediction of success in trade school courses. He attributed this partly to his belief that students are negatively selected, that is,

they are assigned to vocational courses because they did not adapt to the academic program. His chronological review was limited to studies which were concerned with predicting success in institutional vocational training. Among his conclusions, the following are of considerable importance:

> 1) ... studies indicate that it should be possible to select a battery of tests which would combine to yield fair predictions of success in trade school training in any public or private school.
>
> 2) ... such a battery... would probably consist of a verbal intelligence test, a test of mechanical information or experience, a test of spatial ability, and possibly an interest test.
>
> 3) It will be necessary for each school to determine its own selection procedure, in terms of critical scores, in relation to the nature, level, and purposes of its training program.
>
> (pp. 390-391)

Crawford (1966) reported on the development and validation of aptitude test batteries over a fourteen year period at the Los Angeles Trade Technical College. Based on a core of standardized tests, the batteries were used in conjunction with an applicant-instructor-counselor interview. The batteries were designed to predict achievement in fifty-five trade and technical curricula. She concluded that this process was more effective than the use of IQ tests or scholastic achievement tests in the selection of trainees.

A review of aptitude tests from 1919 to 1964 was done by Ghiselli (1966). His objective was to determine the validity of aptitude tests for predicting success both in training and job proficiency. He concluded that intellectual, spatial, and mechanical abilities are most important in predicting success in training while perceptual accuracy and motor abilities are important in predicting success both in training and job proficiency.

Ghiselli's study was unique in that it differentiated between predicting success in training and predicting success in actual job situations. He stated that, although tests can be useful for predicting level of achievement in training programs, they are far less useful in predicting level of job performance. He explained that his findings could be expected since training is usually done in more controlled environments than are found in job situations. A further explanation was that people of lower ability are likely to be eliminated during training and never reach the level of job performance.

A study by Prediger, Waple, and Nusbaum (1968) concerned the validity of aptitudes and achievement in predicting success in high school level vocational education programs. Their study involved a search of the literature from 1954 to 1967 and dealt with 38 studies. They selected 10 predictor categories applied to 11 vocational program areas and calculated the correlation for each predictor-program combination. They concluded that there was significant variation in the results of various studies and noted that this agreed with Patterson's (1956) conclusions. They also noted differences in results between males and females as well as differences in predictability. Their report also agreed with the findings of Ghiselli (1966) regarding the low level of validity of motor ability tests. They concluded that "the frequent observation that academic grades of girls are more predictable than those of boys would appear to hold for vocational courses" (p. 142).

Stock and Pratzner (1969) did an extensive review of research done since 1960 on the prediction of success in training for high school students, post-high school students, and adults. The review classified

the studies in the areas of achievement, completion, and related student characteristics. Warning that the results of their research must be "interpreted cautiously" (p. 4), the authors concluded as follows:

1) It seems apparent that aptitude testing alone is not the whole answer to the student selection/prediction problem(s). Available evidence indicates that other variables, such as interest and motivation, act to influence student behavior in vocational education programs.

2) ... certain types of tests consistently operate more successfully as predictors than do others. One such test, the General Aptitude Test Battery (GATB), has been subjected to numerous investigations and seems to have application to many vocational technical curriculums.

3) ... the value of a given test as a predictor may change over time.

4) ... motor ability tests are of negligible value in the selection-prediction process. In fact, it would appear that an inverse ratio exists between the level of the trade or occupation trained for and the effectiveness of motor ability tests as predictors.

5) The best predictors of future performance in training programs, cognitive as well as non-cognitive, have typically been intellective measures of cognitive ability (e.g. I.Q., reading, arithmetic) and/or measures of past academic achievement in the "solid subjects" (e.g. English, mathematics, etc.). (p. 4)

A study to identify characteristics which were predictive of vocational curriculum choice and success was undertaken by Kapes (1971). His study focused on 458 students and 16 student variables. Among his observations was the finding that choice of a vocational versus an academic curriculum is not as predictable as is success in either curriculum. Also, he concluded that it was easier to predict success in an academic curriculum than it was to predict success in a vocational curriculum. Kapes stated that his study appears to substantiate the theory of Super, "Concerning the vocational development process, it does appear to be somewhat predictable, patterned, and orderly" (p. 137).

Wircenski (1976) designed career counseling instruments which incorporated the variables used in the process of selecting students for vocational education programs. The instruments were then correlated with vocational teachers' predictions of job placement as well as the predictions of job placement made by counselors. In reporting the results of the correlations between the instruments and instructors, he concluded that "... the career counseling instruments were excellent predictors of student job placement for 8 programs and good predictors for 2 additional programs (out of a total of 14 programs)" (p. 8). In correlating the instrument with counselors, he stated that "... the career counseling instruments are better predictors (3 out of 5 programs) of student job placement as compared with the guidance counselor (0 out of 5 programs)" (p. 9). Wircenski believed that the use of career counseling instruments is an objective process that takes into account student ability and interests and can be defended as a method of student selection for vocational programs.

Herr and Baker (1973) designed a study to investigate what data could be useful to school counselors in helping students make appropriate course choices for an AVTS. Due to various problems, such as non-standardized predictive data and data collection difficulties, they questioned the feasibility of state-wide selection models. They observed, "It appears more appropriate to develop specific selection models for each AVTS independently of the others" (p. 37).

A project designed to produce a model for the recruitment and selection of vocational education students was conducted by Pershing and Schwandt (1980). Their research, which was primarily exploratory and descriptive, used a survey instrument which was sent to the 38 secondary

AVTSs and 13 campuses of the Indiana Vocational Technical College in Indiana. Among their conclusions they reported:

1) recruitment is considered important for public relations purposes and for attracting students to particular programs.

2) recruitment increases as enrollment goes down.

3) most schools did not have a written policy for recruitment and selection.

4) fulfilling the needs of students was the most important goal followed by meeting the manpower needs of local industry.

In appraising the literature on student selection for vocational programs, Pucel (1980) noted that little research had been done since 1972. In reviewing the most widely used studies, he pointed out that two approaches exist. The first concerns predictive criteria used to assess an individual's attributes for success in a particular vocational program. Such predictive studies, he believed, yield no "generalizable criteria" that can be used to ascertain success over a broad range of vocational programs. The second system uses a classification structure which considers characteristics of successful workers and relates these characteristics to potential vocational enrollees. Pucel believed that classification strategies can be helpful since research indicates that there are differences in the characteristics of successful workers in different occupations.

A four year study was conducted by Whinfield (1982) to determine the effectiveness of selection criteria in predicting student success in school programs. One conclusion of the study was that tests and grades were moderately good predictors of scholastic success but the interview was the best predictor.

Since attitudes of school officials toward vocational education could have significant influence on student recruitment and selection, Gardner (1972) investigated such attitudes. For his study, Gardner used the Attitude Toward Vocational Education (ATVE) scale developed at the University of Nebraska. Comparing the attitudes of administrators, counselors, and students toward vocational education, his data showed that:

1) there was no significant difference in attitude toward vocational education between the administrators and the counselors.

2) students from schools where the administrators and counselors scored high on the ATVE scale also scored higher than did students from schools where the administrators and counselors scored low.

3) student attitudes toward vocational education do become more positive after one semester in the AVTS.

4) few, if any, of the administrators or counselors exhibited clearly unfavorable attitudes toward vocational education, however, there was revealed a variation which could be appropriately classified as less positive and more positive. (pp. 77-80)

The studies cited above deal, to a great extent, with predictive criteria which are measurable and obtained through testing, school records, or other observable data. Although the studies indicate that specific aptitudes or other measurable data can yield predictability regarding success or persistence in vocational programs, the consensus is that such batteries should be designed for specific training or educational facilities based on their unique needs and characteristics. Also, the studies caution that there are non-cognitive elements, such as interest and motivation (Stock and Pratzner, 1969) which must be considered in any recruitment and selection process.

The researcher believes that there are additional variables which influence student recruitment and selection. These variables

subsequently affect vocational school enrollment. Among these are student readiness for occupational decision-making and attitudes of sending school personnel, parents, and peers toward vocational education. In addition, the size of the potential pool of applicants to fill programs in AVTSs may ultimately determine whether an AVTS will adopt a "selective" selection policy or a policy of accepting all simply to maximize the use of school resources.

This study will address these concerns.

CHAPTER III

PROCEDURES

The primary objective of this study was to determine the prevailing mood as to whom could best benefit from vocational education programs in Pennsylvania. Recruitment and selection processes in area vocational technical schools and opinions of selected vocational educators concerning the processes were examined to determine the prevailing mood. The second objective of the study was to determine the opinions of directors and counselors concerning the issues of student readiness for career decision-making, the attitudes of significant others toward vocational education, and predictive criteria for program success and completion. The third objective of the study was to determine if there were significant differences between directors and counselors in such opinions. The fourth objective of the study was to determine if there were significant differences among the opinions of vocational educators concerning student recruitment and selection based on specific factors. One-way analysis of variance and t-tests were computed using the following nine demographic factors as independent variables:

1. type of school (full or part-time),
2. service area (urban, rural, or mixed),
3. number of students enrolled,
4. who selects students,
5. when students select AVTS curriculum,
6. years in present position,

7. sex,
8. age,
9. education level.

Hypotheses

The following hypotheses were tested in this study:

Hypothesis One

There are significant differences between directors and counselors in their stated opinions concerning student recruitment and selection.

Hypothesis Two

There are significant differences among directors in their stated opinions concerning student recruitment and selection based on characteristics of the schools.

Hypothesis Three

There are significant differences among vocational directors and counselors in their stated opinions concerning student recruitment and selection based on demographic factors.

Population

The population for the study consisted of the director and a counselor of each AVTS in Pennsylvania. The director was identified by the Pennsylvania Department of Education, Bureau of Vocational Education (1982b). The counselor for each school was the person identified by the director as being most closely associated with student recruitment and selection. The director's assistance in the identification of the

counselor was sought because some schools employed several counselors while in others none was identified. Table 1 shows the population and sample for both groups of vocational educators.

Table 1

Population and Sample for Two Groups of Educators Surveyed from AVTSs in Pennsylvania

	Number	
Educator Group	Population	Sample
Vocational Director	85	85
Vocational Counselor	85	85
Total	170	170

Instrumentation

A questionnaire to determine policies and opinions concerning student recruitment and selection was designed by the researcher based on his experience as a counselor and the literature search done on student recruitment and selection. The first section of the questionnaire led to the collection of information on the characteristics of the schools and policies currently used in recruiting and selecting students. This section was designed to determine the extent to which systematic approaches to student recruitment and selection have been developed as well as the similarities and differences which exist in the methods employed.

The second section of the questionnaire provided a Likert type scale to assess the respondents' opinions regarding student readiness, attitudes of significant others toward vocational education, and predictive criteria. Opinions were sought concerning the readiness of students to make realistic career decisions as well as the adequacy of information possessed by students for making such decisions. Opinions concerning the perceived attitudes of parents, peers, and home school personnel toward vocational education were solicited to determine if the educators believed students who were considering vocational technical programs were positively or negatively influenced. Finally, opinions were sought concerning the predictability of success or persistence in vocational programs. Opinion items were answered on a five-point scale ranging from strongly disagree (1) to strongly agree (5).

The third section of the questionnaire collected demographic data on the respondents to permit comparison of opinions based on age, sex, education, and experience as a director or counselor. This section was designed to determine if there were significant differences in opinions based on such factors.

The questionnaire was first submitted to 21 educators from the service area of the Wilkes-Barre AVTS who were familiar with student recruitment and selection for vocational education. This group was asked to complete the questionnaire and offer comments pertaining to the general design and content of the instrument. Of the 21 educators who were asked to participate, 15 completed and returned the questionnaire. The occupational composition of the 15 was as follows:

1 AVTS Director
2 AVTS Counselors
1 Senior High Principal
6 Senior High Counselors
1 Junior High Principal
3 Junior High Counselors
1 District Director of Guidance

The results of the pretest were then reviewed and revisions were made to the questionnaire.

Data Collection

The questionnaire (Appendix A) was mailed to directors of area vocational technical schools as identified by the Bureau of Vocational Education, Pennsylvania Department of Education. The initial mailing consisted of a cover letter (Appendix B), questionnaire, and a self-addressed stamped envelope directed to 85 area vocational technical schools. The directors were asked to give the counselors' questionnaire and cover letter (Appendix C) to the counselor most closely associated with student recruitment and selection. Four weeks after the initial mailing, a follow-up letter (Appendix D), questionnaire, and a self-addressed stamped envelope were mailed to all non-respondents. Two weeks after the follow-up letter, telephone calls were made to all non-respondents and additional questionnaires were sent as requested.

Treatment of Data

After tallying the data, opinions of the directors and counselors were compared using a *t*-test. One-way analysis of variance and *t*-tests were performed to determine if there were significant differences among the stated attitudes of the educators based on specific factors.

The Computation Center at The Pennsylvania State University was used for analyzing the data. The Statistical Package for the Social Sciences (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975) was used to determine means and related statistics for the two groups of educators. The Likert Attitude Scale Analysis Main Program (Kohr, 1973) was used to assess the reliability of questionnaire items.

The opinion statements were divided into 3 subscales. Subscale 1 concerned student readiness and consisted of items 1-5. Subscale 2 concerned attitudes of others and consisted of items 6-13. Subscale 3, dealing with predictive criteria, consisted of items 14-21.

Although this study dealt with the entire population of directors and counselors most closely associated with student recruitment and selection, inferential statistics were used. The use of tests of significance in such a case "indicates the probability that the relationship is a general one over time" (Babbie, 1973, p. 313). The findings of this study, therefore, can be applied to directors and counselors over time rather than be limited to those involved in this study.

CHAPTER IV

PRESENTATION OF FINDINGS

In this study, student recruitment and selection in area vocational technical schools in Pennsylvania was examined. The opinions of directors and counselors concerning the process were assessed to determine the prevailing mood as to whom could best benefit from vocational education programs. The population was identified by the Pennsylvania Department of Education, Bureau of Vocational Education. All subjects were sent a questionnaire developed by the researcher.

The first section of this chapter contains a report on the response rate to the questionnaire by the subjects. The second section describes the schools involved in the study and the procedures used in student recruitment and selection. The third section deals with the research question concerning the opinions of the respondents concerning student recruitment and selection. The fourth section presents results relative to the three hypotheses. The fifth section reports a summary of the findings.

Response to the Questionnaire

Of the 170 vocational educators (85 directors, 85 counselors) who were sent a questionnaire, 156 (92%) responded. Of the 85 directors solicited, 77 (90%) responded. Of the 85 counselors solicited, 79 (93%) responded. Usable returns numbered 151 (89%). Two directors' returns were unusable. One school had not yet opened and another return was

received after data had been analyzed. One unusable return from a counselor contained multiple responses to many items. The number and percent of usable returns from both groups of educators is reported in Table 2.

Table 2

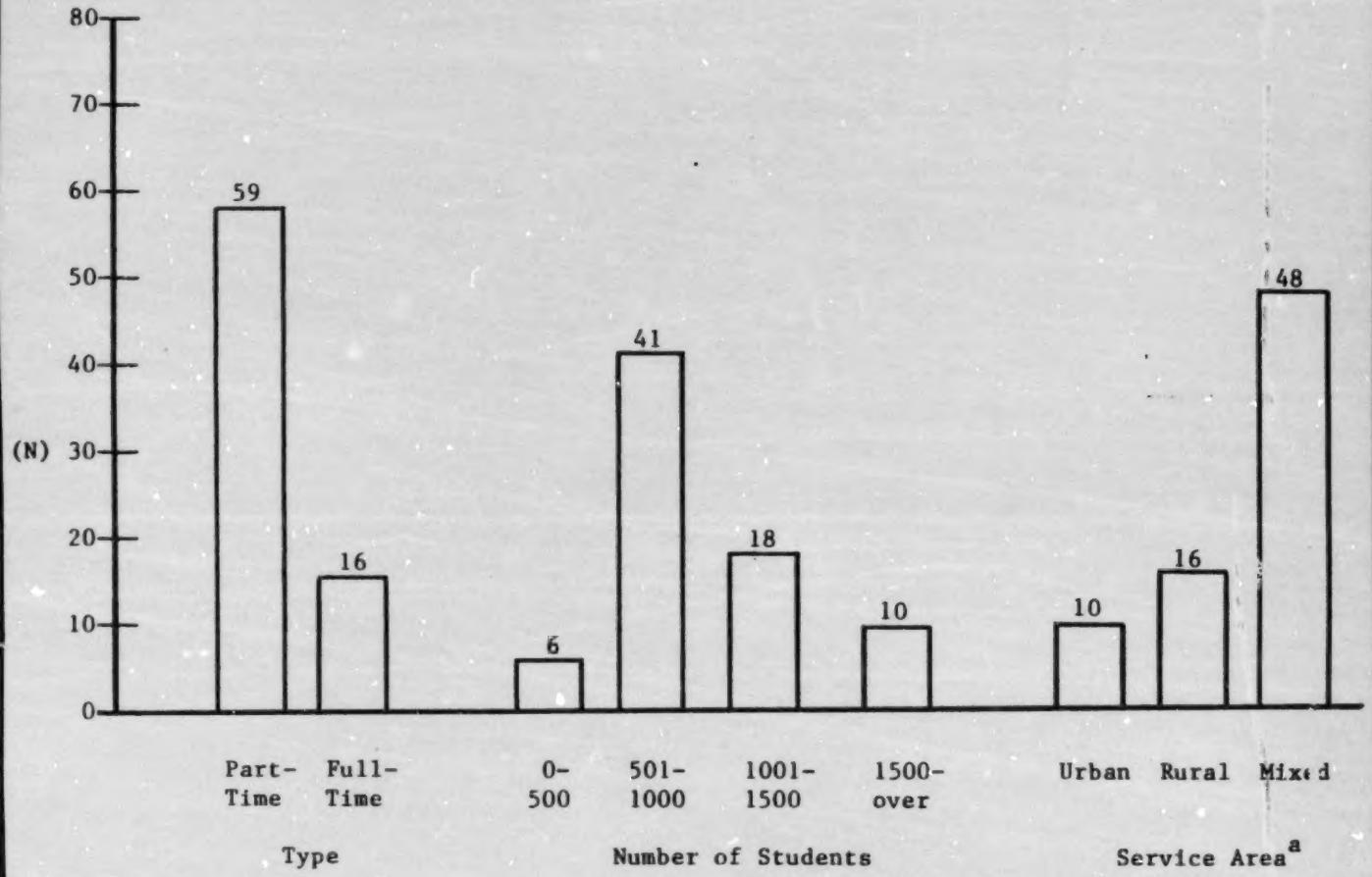
Number and Percent of Usable Returns From Two Groups of Educators Employed by AVTSs in Pennsylvania

	Usable Returns	
Educator Group	Number	Percent
Vocational Director	75	88.2
Vocational Counselor	76	89.4
Total Respondents	151	88.8

Description of Schools and Procedures Used in Student Recruitment and Selection

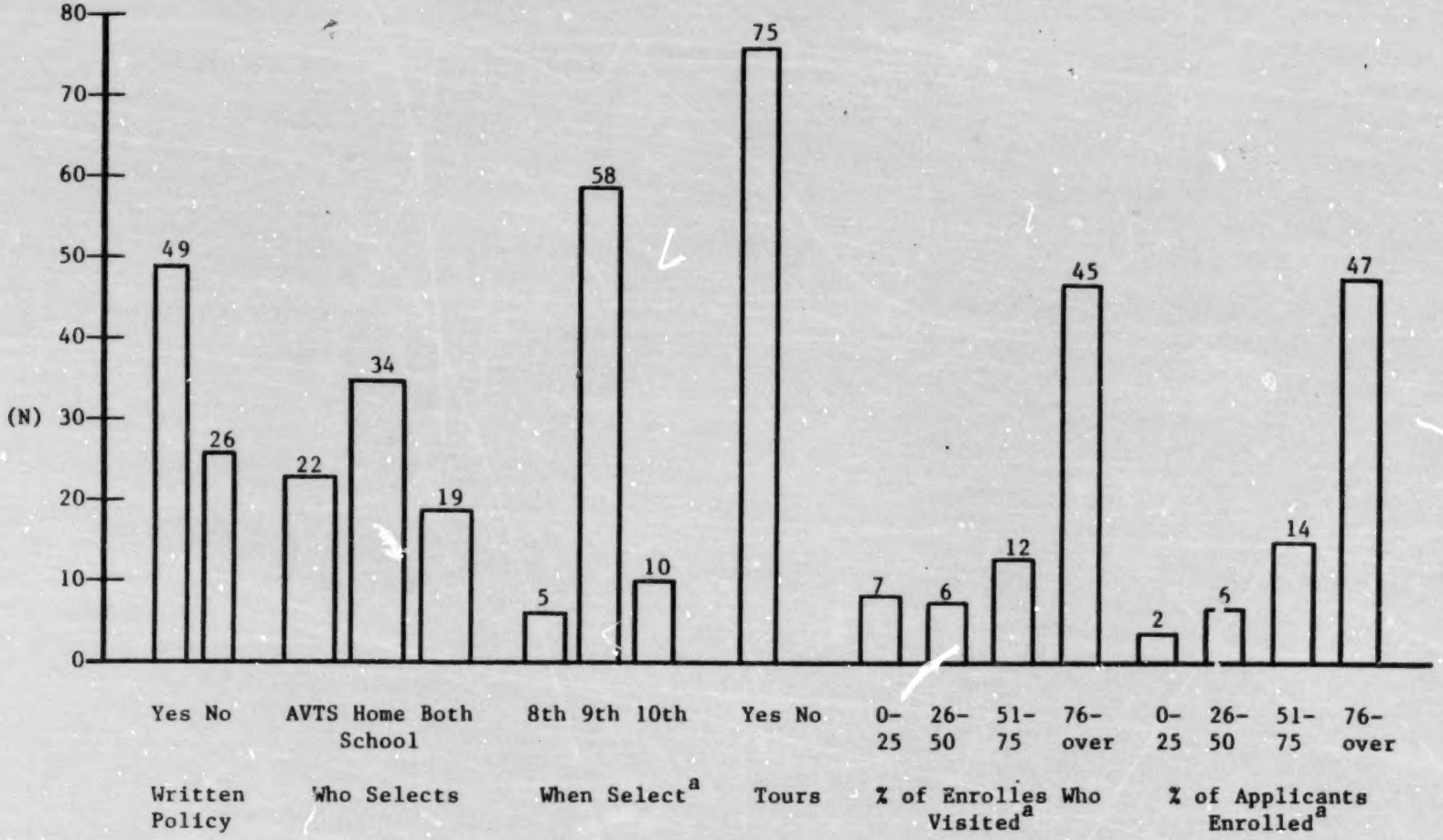
In order to ascertain the current status of student recruitment and selection for AVTSs in Pennsylvania, the first part of the questionnaire sought information on characteristics of the schools involved in the study. A breakdown of schools by type (part-time or full-time), number of students enrolled, and service area (urban, rural, or mixed) is given in Figure 1. The first part of the questionnaire also sought information on procedures used in student recruitment and selection. Figure 2 presents the responses of directors to these items.

After determining the characteristics of the participating schools and the procedures used in student recruitment and selection, the



[a]One school did not respond.

Figure 1. Characteristics of 75 AVTSs Participating in Study.



[a]All schools did not respond.

Figure 2. AVTS Directors' Responses to Items Related to Student Recruitment and Selection.

researcher requested information on the courses most requested and least requested by prospective students. As indicated in Table 3, cosmetology, auto mechanics, and data processing were the most requested courses. Least requested courses were drafting, sheet metal, air conditioning, and masonry, as shown in Table 4. Complete lists of responses are reported in Appendices E and F.

Finally, the first part of the questionnaire asked for directors' responses as to 1) the major strength of their recruitment and selection process, and 2) their major difficulty in recruiting and selecting students. The most frequent responses, in rank order, were as follows:

Major Strengths (rank order)

1. Visitations by junior high students to the AVTS.
2. Good working relationship with sending school.
3. Successful, employed graduates.
4. Support of sending school counselors.
5. Slide presentation (of AVTS).
6. Promotion, public relations.
7. Involvement of sending school personnel and ratings of home school teachers.
8. Visits to sending schools.

Major Difficulties (rank order)

1. Sending school "protectionism" due to declining enrollment.
2. Sending school counselors.
3. Negative reactions to vocational education by sending schools.
4. Lack of knowledge of vocational education by sending school personnel.
5. Discouraging "better" students from attending AVTS.
6. Sending school budget and AVTS per pupil cost.

Table 3

Courses Most Requested by Prospective Students

As Reported by AVTS Directors

Rank[a]	Course[b]	Most Requested (# of directors) 1st Choice	2nd Choice	3rd Choice
1	Cosmetology	36	20	9
2	Auto Mechanics	14	19	18
3	Data Processi[illegible]	13	9	10
4	Auto Bo[illegible]	3	4	7
5	Carpentry	2	3	12

[a]Rank based on number of directors who listed course as most requested.

[b]A complete list of most requested courses is reported in Appendix E.

Table 4

Courses Least Requested by Prospective Students

As Reported by AVTS Directors

Rank[a]	Course[b]	Least Requested (# of directors) 1st Choice	2nd Choice	3rd Choice
1	Drafting	10	8	3
2	Sheet Metal	5	8	1
3	Air Conditioning	5	5	1
4	Masonry	5	4	1
5	Machine Shop	5	2	4
6	Appliance Repair	4	3	3

[a]Rank based on number of directors who listed course as least requested.

[b]A complete list of least requested courses is reported in Appendix F.

7. Not able to reach all students.

8. Parents' preconceived ideas of vocational education.

Although there were more than 30 different responses to the questions concerning major strengths and major difficulties, the majority of responses stressed the need for visitations to the AVTS by junior high school students and good working relationships with sending school personnel as major strengths in their recruitment and selection process. Declining enrollments at the sending schools and negative attitudes toward vocational education appeared to be the major difficulties in recruiting and selecting students.

Item six, which sought information on the criteria used in selecting students for the AVTS, could not be dealt with because it was unanswered in part or total by the majority of respondents.

Research Question

The research question addressed in this study focused on the opinions of directors and counselors of area vocational technical schools concerning issues related to student recruitment and selection. The issues of interest were student readiness for career decision-making, attitudes of significant others toward vocational education, and predictive criteria for program success and completion. These opinions were examined in relation to procedures currently employed by AVTSs in recruiting and selecting students.

Items on the questionnaire which assessed opinions of the respondents were answered on a five-point scale ranging from strongly disagree (1) to strongly agree (5). Table 5 presents the mean scores of responses for all 29 items. Two cases were deleted because the minimum number of items (20) was not completed.

Table 5

Related Statistics for Directors' and Counselors' Opinions

Concerning Student Recruitment and Selection

Item	(N=75) Directors' Mean Score	SD	(N=76) Counselors' Mean Score	SD	(N=151) Total Mean Score	SD
1. Students in junior high school are sufficiently knowledgeable about careers to be able to make appropriate career choices.	2.71	1.11	2.26	.97	2.48	1.06
2. Students in junior high school are mature enough to make appropriate career decisions.	2.81	1.04	2.50	1.16	2.66	1.10
3. Counselors in junior high school do an adequate job in preparing students for career decisions.	2.37	.93	2.71	.96	2.54	.95
4. Sending schools do an adequate job in providing information to students on vocational/technical occupations.	2.51	.97	2.58	1.07	2.54	1.01
5. Academic teachers in junior high school are knowledgeable regarding AVTS curricula.	1.72	.67	1.67	.81	1.70	.74
6. Counselors in junior high school have positive attitudes toward the AVTS.	3.05	.94	3.08	1.07	3.07	1.00
7. Administrators in junior high school have positive attitudes toward the AVTS.	3.18	.90	2.93	1.01	3.05	.96
8. Academic teachers in junior high school have positive attitudes toward the AVTS.	2.35	.80	2.29	.88	2.32	.83
9. Academic teachers in senior high school have positive attitudes toward the AVTS.	2.21	.89	2.07	.87	2.14	.88
10. Students are strongly influenced by parents in making decisions regarding high school curricula.	3.92	.85	4.04	.84	3.97	.85
11. Parents have a positive attitude toward their children attending an AVTS.	3.51	.91	3.39	1.00	3.44	.95
12. Students are strongly influenced by their peers in making decisions regarding high school curricula.	4.23	.61	4.35	.70	4.28	.66
13. Students who attend an AVTS are well accepted by their academic peers.	2.65	.96	2.43	.88	2.54	.91
14. Students who achieve in AVTS programs usually have achieved in previous academic programs.	3.00	.93	3.18	1.05	3.09	.99
15. Students who have not performed well in academic programs are more attracted to the AVTS than students who have performed well in academic programs.	3.68	.82	3.94	.82	3.81	.82

Table 5 continued

Item	(N=75) Directors' Mean Score	SD	(N=76) Counselors Mean Score	SD	(N=151) Total Mean Score	SD
16. Intelligence is the single most important criterion contributing to student success in an AVTS program.	2.16	.64	1.93	.62	2.05	.64
17. Motivation is the single most important criterion contributing to student success in an AVTS program.	4.11	.67	4.06	.88	4.10	.76
18. Completion of an AVTS program can best be predicted by junior high school attendance.	2.71	.87	2.77	1.00	2.74	.93
19. School attendance often improves when a student goes from junior high school into an AVTS program.	3.87	.66	3.67	.95	3.76	.82
20. School attendance remains consistent when a student goes from junior high school into an AVTS program.	2.58	.84	2.93	1.00	2.76	.93
21. Interest inventories are important for AVTS placement.	3.59	.89	2.95	1.00	3.26	1.00
22. Grades assigned in AVTS programs indicate similar achievement to grades assigned in academic programs.	2.73	.94	2.60	.92	2.66	.92
23. It is not unusual for students to achieve higher grades in AVTS programs than they achieved in prior academic programs.	3.99	.80	4.09	.71	4.04	.75
24. Student selection for the AVTS should be done by AVTS personnel rather than by sending school personnel.	3.62	1.13	3.75	1.33	3.69	1.20
25. AVTS programs which are in greatest demand by students are those for which there are the greatest supply of jobs.	2.57	1.02	2.51	1.00	2.54	1.00
26. Once a student is enrolled in an AVTS program, course change should be discouraged.	2.20	.94	2.03	.89	2.11	.92
27. AVTS teachers are usually willing to accept students who desire to transfer from another AVTS program.	3.63	.87	3.69	.92	3.66	.89
28. AVTS programs should be for two years, beginning in eleventh grade.	2.51	1.20	2.82	1.48	2.67	1.34
29. There is a need for more research on student recruitment and selection for AVTSs.	4.08	.97	4.12	1.07	4.10	1.02

Missing responses to items ranged from 1 to 4 (1 to 3%). For analysis, the total mean scores of directors and counselors were used. Mean scores below 3.00 were interpreted as indicating negative opinions. Mean scores above 3.00 were considered positive opinions. The important findings, according to the mean scores of the opinion responses, are as follows:

Regarding student readiness, directors and counselors believed that:

1. Students in junior high school are neither knowledgeable enough about careers nor mature enough to make appropriate career decisions.

2. Sending schools do not do an adequate job in preparing students for career decisions.

3. Counselors in junior high school do not do an adequate job in preparing students for career decisions.

4. Sending schools do not do an adequate job in providing information to students on vocational/technical occupations.

Regarding attitudes of significant others toward vocational education, directors and counselors believed that:

1. There is uncertainty whether the attitudes of counselors and administrators of sending schools are positive or negative toward the AVTS.

2. Sending school teachers do not have positive attitudes toward the vocational technical school.

3. Parents have positive attitudes toward their children attending an AVTS.

4. Students who attend an AVTS are not well accepted by their academic peers.

Regarding predictive criteria, directors and counselors believed that:

1. Motivation is more important than intelligence in contributing to success in an AVTS program.

2. School attendance often improves when a stu[illegible]t goes from junior high school into an AVTS program.

3. Completion of an AVTS program cannot best be predicted by junior high school attendance.

4. Interest inventories are important for AVTS placement, according to directors. Counselors tend to be uncertain as to their importance.

5. Grades often improve when a student goes from junior high school into an AVTS program.

Regarding other issues of importance, directors and counselors believed that:

1. Student selection should be done by the AVTS rather then by sending school personnel.

2. AVTS programs in greatest demand are not necessarily those for which there are the greatest supply of jobs.

3. Once a student is enrolled in an AVTS program, course change should not be discouraged.

4. There is a need for more research on student recruitment and selection.

Opinion items on the questionnaire were analyzed using The Likert Attitude Scale Analysis Main Program (Kohr, 1973). The 29 items had an alpha reliability of .582. The questionnaire was then broken down into three subscales titled student readiness, attitude of significant others, and predictive criteria. Table 6 illustrates the reliability of the subscales.

Table 6

Reliability of Opinion Items' Subscales

Subscale	Item Numbers	Total Items	r
Student Readiness	1-5	5	.772
Attitude of Others	6-13	8	.693
Predictive Criteria	14-21	8	-.101

Results Relating to Hypotheses

The use of subscale scores of the opinion items for testing the hypotheses was investigated. This approach was abandoned when an analysis of the results showed that significant differences in the mean scores of several items were negated by significant differences in other items within the same subscale.

The data were analyzed using multiple regression. Due to the fact that nominal independent variables were measured, multiple regression did not contribute to the study. One-way analysis of variance and *t*-tests were then performed to test the hypotheses.

The three hypotheses were stated in the null form for statistical analyses. The responses of vocational directors and counselors to the 29 opinion statements of the questionnaire were used to test the three hypotheses. Hypothesis one, dealing with differences in opinion between directors and counselors, was tested by comparing the mean responses of directors and counselors using *t*-tests. Hypothesis two concerned differences in opinions of directors based on characteristics of the schools: type, service area, number of students, who selects students,

and when they are selected. One-way analysis of variance was used to compare the mean reponses. Hypothesis three investigated differences in opinions of directors and counselors based on demographic data: years of experience in the job, sex, age, and education. One-way analysis of variance and t-tests were performed to compare the mean responses.

In setting significance levels for testing the hypotheses, the researcher considered the effect of multiple dependent variables in inflating error rates (Leary and Altmaier, 1980). To reduce the risk of Type I error, the suggestion of Strahan (1982) was used. The significance level .01 was divided by 29, the number of dependent variables treated in the study. This more rigorous test produced a comparisonwise risk of .0003 and a collective error rate of .01 (.009). It must be emphasized that this procedure, while reducing the risk of a Type I error (rejecting a true null hypothesis), increases the chance of a Type II error (accepting a false null hypothesis).

Hypothesis One: Differences Between Directors and Counselors Concerning Student Recruitment and Selection

The first hypothesis stated that there were no significant differences between directors and counselors in their stated opinions concerning student recruitment and selection. As shown in Table 7, a difference ($p < .0003$) was found in item 21. Thus hypothesis one was rejected with a collective error rate of .01. Counselors stated more negative opinions than directors toward the importance of interest inventories for AVTS placement.

Hypothesis Two: Differences Among Directors Concerning Student Recruitment and Selection Based on Characteristics of the Schools

The second hypothesis stated that there were no significant differences among directors in their stated opinions concerning student

Table 7

Opinion Statements Showing Significant Differences

Based on Specific Factors

Opinion Statement	Factor (N)	Mean	Standard Deviation	2-Tail Probability
21. Interest inventories are important for AVTS placement.	Director (75)	3.59	0.89	
	Counselor (76)	2.95	1.00	.0000
24. Student selection for the AVTS should be done by AVTS personnel rather than by sending school personnel.	AVTS (22)	4.50	0.67	
	Sending (34)	3.12	1.11	
	Both (19)	3.47	1.02	.0000

Difficulties centered on declining enrollments at the sending schools and negative attitudes toward vocational education.

The research question, dealing with the opinions of directors and counselors of area vocational technical schools, indicated that the respondents believed that junior high school students are neither knowledgeable enough about careers nor mature enough to make appropriate career decisions. Also, there was uncertainty among the respondents whether counselors and administrators in sending schools have positive or negative attitudes toward the AVTS. There was also disagreement between directors and counselors regarding predictive criteria for success and completion of vocational programs.

Results of testing hypothesis one showed that there were significant differences between directors and counselors in their opinions concerning student recruitment and selection; therefore, hypothesis one was rejected. Hypothesis two was rejected because there were significant differences among directors based on characteristics of the schools involved in the study. Since there were no significant differences in the responses of directors and counselors based on demographic factors, hypothesis three was not rejected. In summary, two of the three null hypotheses were rejected leading to conclusions that in this sample the factors which accounted for differences in the opinions of vocational educators concerning student recruitment and selection were job, and who selected the students.

CHAPTER V

SUMMARY AND CONCLUSIONS

In this study, the status of student recruitment and selection in area vocational technical schools in Pennsylvania was examined by identifying the procedures currently used in recruiting and selecting students and assessing the opinions of vocational directors and counselors concerning issues related to the process. Certain characteristics of the schools involved in the study were given along with the courses which are most frequently and least frequently requested by applicants. Respondents identified what they considered to be their major strengths and difficulties in recruiting and selecting students. The opinions of directors and counselors were compared based on their roles in the schools. A comparison of directors' opinions was made based upon the characteristics of the schools. The study also investigated the effect of demographic factors on opinions of vocational directors and counselors.

Research Question

The research question addressed in this study focused on the opinions of directors and counselors of area vocational technical schools concerning issues related to student recruitment and selection. The issues of interest were student readiness for career decision-making, attitudes of significant others toward vocational education, and predictive criteria for program success and completion.

Hypotheses

Three hypotheses were tested regarding the opinions of vocational directors and counselors concerning issues related to student recruitment and selection. The hypotheses were as follows:

Hypothesis One

There are no significant differences between directors and counselors in their stated opinions concerning student recruitment and selection.

Hypothesis Two

There are no significant differences among directors in their stated opinions concerning student recruitment and selection based on characteristics of the schools.

Hypothesis Three

There are no significant differences among vocational directors and counselors in their stated opinions concerning student recruitment and selection based on demographic factors.

Procedures

Population and Sample

The population for this study consisted of the director and a counselor of each area vocational technical school in Pennsylvania. The director was identified in a listing provided by the Pennsylvania Department of Education, Bureau of Vocational Education. The counselor

was identified by the director as the counselor most closely associated with student recruitment and selection.

Instrumentation

A questionnaire, developed by the researcher, was mailed to the director and counselor of each of the 85 AVTSs in Pennsylvania. The questionnaire provided information on characteristics of the schools, opinions of directors and counselors concerning student recruitment and selection, and demographic data on the respondents.

Survey Response

A response was received from 156 (92%) of the 170 subjects in the study. Usable returns numbered 151 (89%). Usable returns were received from 75 (88%) of the directors, and from 76 (89%) of the counselors.

Treatment of Data

The Computation Center at The Pennsylvania State University was used for analyzing the data. The Statistical Package for the Social Sciences (Nie et al., 1982) was used to determine means and related statistics for the two groups of educators. One-way analysis of variance and t-tests were performed on the data to determine differences in opinions based on specific factors. The Likert Attitude Scale Analysis Main Program (Kohr, 1973) was used to assess the reliability of questionnaire items.

Findings

Characteristics of Seventy-Five AVTSs Participating in Study

Fifty-nine of the schools were reported as being part-time, 16 were reported as full time. Six schools had enrollments of 500 or less, 41 had enrollments between 500 and 1000, 18 had enrollments between 1000 and 1500, and 10 schools had enrollments over 1500. Ten schools reported their service area as being urban, 16 schools were rural, and 48 reported a mixed service area.

Procedures Regarding Student Recruitment and Selection

Forty-nine schools had a written policy describing the process of student selection, 26 schools did not. In 22 schools the AVTS selected the students, in 34 schools the home school selected the students, while in 19 schools both the AVTS and the home school participated in the selection process. Students were selected for the AVTS during ninth grade in 58 schools. Ten schools selected students during tenth grade, while five schools selected students during eighth grade. Tours of the AVTSs were provided by all schools. Forty-five of the schools reported that over 75 percent of their enrollees visited the AVTS prior to enrolling. Twenty-five of the schools reported less than 75 percent of their enrollees visited the AVTS prior to enrolling. Regarding the percent of applicants who were enrolled, 47 schools reported an enrollment of more than 75 percent of those who applied.

Courses most requested by prospective students were, in order, cosmetology, auto mechanics, data processing, auto body, and carpentry. Courses least requested were, in order, drafting, sheet metal, air conditioning, masonry, machine shop, and appliance repair.

Major strengths of recruitment and selection processes were visitations by junior high students to the AVTS, good working relationships with sending schools, successful and employed graduates, support of sending school counselors, and overall promotion of the AVTSs. Major difficulties of recruitment and selection processes were sending schools' "protectionism" due to declining enrollment, sending school counselors, negative reactions to vocational education by sending schools, lack of knowledge of vocational education by sending school personnel, discouraging "better" students from attending the AVTSs, sending school budgets and AVTS per pupil costs, inability to reach all students, and parents' preconceived ideas of vocational education.

Research Question

The research question addressed in this study focused on the opinions of directors and counselors of area vocational technical schools concerning issues related to student recruitment and selection. The important findings are as follows:

1. Nearly two-thirds of the directors and counselors (63%) believed that students in junior high school are not sufficiently knowledgeable about careers to be able to make appropriate career decisions. An overwhelming number of schools (85%), however, require students to select the AVTS curriculum during junior high school.

2. A slight majority of directors and counselors (57%) believed that counselors in junior high school do not do an adequate job in preparing students for career decisions.

3. While almost all of the directors and counselors (94%) believed that students are strongly influenced by their peers in making decisions

regarding high school curricula, most (55%) believed that students who attend an AVTS are not well accepted by their academic peers.

4. Although only one fourth (24%) of the respondents did not agree that selection of students should be done by the area vocational technical school, in nearly half of the schools (45%) the sending schools do the selection.

5. A minority of directors and counselors (23%) believed that AVTS programs which are in greatest demand by students are those for which there are the greatest supply of jobs. A substantial majority (64%) did not believe this to be true.

6. A large majority of the directors and counselors (77%) believed that students who have not performed well in academic areas are more attracted to the AVTS than students who have performed well in academic programs.

7. A great many of the respondents (85%) believed there is a need for more research on student recruitment and selection.

Hypotheses

Hypothesis one stated that there are no significant differences between directors and counselors in their stated opinions concerning student recruitment and selection. Hypothesis one was rejected because directors (M=3.59) were more positive ($p < .0003$) than counselors (M=2.95) toward the importance of interest inventories for AVTS placement.

Hypothesis two stated that there are no significant differences among directors in their stated opinions concerning student recruitment and selection based on characteristics of the schools. Hypothesis two was rejected because directors of schools where the AVTS selects

($\underline{M}$=4.50) were more positive ($\underline{p} < .0003$) than directors of schools where the sending school selects ($\underline{M}$=3.12), or where both select ($\underline{M}$=3.47), that student selection should be done by AVTS personnel.

Hypothesis three stated that there are no significant differences among vocational directors and counselors in their stated opinions concerning student recruitment and selection based on demographic factors. Hypothesis three was not rejected since there were no opinion statements showing a significant difference based on demographic factors.

Conclusions

An analysis of the data collected in this study permits the following conclusions to be drawn:

1. It is concluded that area vocational technical schools in Pennsylvania must take an active role in the recruitment and selection of students, since the major difficulty in recruiting students is home school "protectionism" caused by declining enrollments.

2. It is concluded that increased efforts must be made to reach all junior high school students with information on the benefits of vocational education participation, because sending schools are failing to do so.

3. It is concluded that recruitment efforts of AVTSs need to address strategies to enhance the image of vocational education, not only in the junior high schools but throughout the entire community.

4. It is concluded that educators must strive to inform students of labor market projections for demand occupations and other occupational information to prepare them for realistic career decision-making.

5. It is concluded that more research needs to be done regarding the readiness of junior high school students for making occupational decisions, since the available research is insufficient and often contradictory.

6. It is concluded that there is a need for evaluative studies on how effectively junior high school students are being prepared for occupational and curricular decision-making since there is disagreement between directors and counselors on this issue.

7. It is concluded that efforts should be made to increase articulation and communication between vocational and academic educators in order to foster a better understanding and appreciation of each other's roles in the total education of students, since this is considered to be a major strength of recruitment and selection processes.

Discussion

The purpose of this study was to determine the prevailing mood of AVTS directors and counselors as to whom could best benefit from vocational education programs in Pennsylvania. The methods employed were an examination of the recruitment and selection processes used by area vocational technical schools throughout the state and an assessment of the opinions of directors and counselors concerning the processes. Admittedly, opinions do not necessarily mirror reality. The opinions stated in this study, however, reflect the experiences of professional educators involved in the everyday activities of area vocational technical schools. The author believes that the opinions stated in this study are candid assessments of the problems faced in vocational education today. The overwhelming response to the questionnaire

indicates not only an interest in the topic of student recruitment and selection, but a dedication to vocational education by those who responded as well as a desire to see problem areas improve.

While this study dealt with student recruitment and selection in area vocational technical schools in Pennsylvania, it should be pointed out that most vocational education programs in Pennsylvania are conducted in comprehensive high schools. At the secondary level, during 1982-83 the enrollment was 81,089 in AVTSs compared to 146,093 in the high school vocational education programs (Bureau of Vocational Education, Accountability Report, 1982-83). This study focused on the area vocational technical schools because of their unique characteristics, especially the need to recruit students at the secondary level. Furthermore, in the case of excess applications, the AVTS can select only the number of students permitted by the availability of work stations.

As indicated by the responses of directors in this study, a major difficulty currently faced by the schools is declining enrollments. Where once the problem was that of too many applicants for vocational programs, the emphasis now is on recruitment. The majority of directors and counselors believed that student selection should be done by the AVTS rather than by sending schools. This opinion may indicate a belief that more could be done in making students aware of the benefits of vocational education. In instances where recruitment efforts fail, programs may be dropped and staff furloughed to hold down operating costs. The importance of student recruitment and selection to directors and counselors may have been the prime motivation for the 92 percent response rate to the questionnaire used in this study.

Aside from the problem of declining enrollments, the area vocational technical schools must strive for the proper placement of students in vocational programs. The results of this study indicate a prevailing opinion that student selection and predictive criteria require more data than testing alone can provide. Non-cognitive elements such as motivation and interest were considered by vocational educators to be vital in predicting success in such programs. This finding corroborates that of Stock and Pratzner (1969).

Student recruitment and selection for vocational programs is also influenced by student readiness for making career choices. McDaniels (1968) believed that students in ninth grade were not too young to make realistic career decisions but, rather, were too poorly prepared to make such decisions. The directors and counselors in this study affirmed the belief that ninth grade students are poorly prepared, but they also believed that they are not mature enough to make appropriate career decisions. In the same vein, Ginzberg's (1970) statement that occupational choice is subject to change is support for the opinions of directors and counselors who indicated that course change should not be discouraged.

This study also demonstrated that, although vocational educators believed that parents have positive attitudes toward vocational education, they were uncertain regarding the attitudes of sending school personnel. Also, they believed that vocational students are not well accepted by their academic peers. Thus, there may be conflicts caused by the attitudes of significant others which influence the career decision-making process of junior high school students. This coincides with the findings of Gardner (1972) that attitudes toward vocational education could be less positive and more positive.

Recruitment and selection of students for area vocational technical schools involves many considerations. Declining enrollments, increasing costs, student readiness for career decision making, attitudes toward vocational education, and the lack of established predictive criteria all contribute to the difficulties faced by vocational educators in their attempt to provide quality education and adequate preparation for life for the students enrolled in vocational programs. There appears to be no one method which could be employed by all schools to assure that their recruitment and selection efforts serve the purposes for which they are designed. Herr and Baker (1979) suggested that the development of selection policies should be left to the individual schools rather than attempting to develop state-wide models. The schools should be guided by a philosophy which would, at minimum, expose all students to the benefits of vocational education. Each student should be allowed to select and pursue a program of study which will challenge and use individual interests and abilities and provide the basic skills needed to enter the world of work to become a contributing member of society.

Area vocational technical schools can also encourage elementary and junior high schools to intensify their efforts in providing students information on the world of work and assist them in doing so. For example, results of this study indicate that directors and counselors believed that the programs which are in greatest demand are not necessarily those for which there are the greatest supply of jobs. Students should be made aware of labor market projections which indicate future manpower needs. Such information must also be void of bias toward occupations which purportedly require only the use of "hands" and not "heads". Students should be informed that vocational education

teaches the whole person and that hands unguided by theory and proper attitudes may be busy hands but, more often than not, will be unproductive hands.

AVTS personnel must also strive to find ways to eliminate negative attitudes which may influence junior high school students. Vocational educators could increase understanding of vocational education by providing tours of the AVTS not only for prospective students but also for parents, civic groups, and the media. In-service programs for academic educators could increase their knowledge about vocational education and hopefully influence their attitudes. Most important, effective communication between the area vocational technical schools and sending schools must be maintained to deal cooperatively with the problems faced by the total educational system.

In summary, the researcher believes that those who can best benefit from vocational education programs are those individuals whose combination of interests and aptitudes point to vocational education programs as both appropriate and beneficial in realizing educational potential. The major difficulties, as expressed by vocational directors and counselors, lie not in the identification and selection of students but, rather, in getting the message of vocational education to all junior high students. This message must be objective, optimistic, and truthful in its promise of being able to fulfill both individual and societal needs. If vocational education is to remain an effective force in our educational system, it must respond to the needs, interests, and abilities of students as well as to the needs of society for a skilled and articulate workforce. The exigencies of selling the concept of vocational education do not imply that quality be sacrificed. Perhaps the problems brought on by declining enrollments will enrich the quality

of vocational education by requiring educators to rethink and refine their own educational philosophies. It is hoped that this study will inspire more research and greater emphasis on student recruitment and selection for area vocational technical schools.

Recommendations For Future Research

Based on the results of this study, the researcher makes the following recommendations for future research:

1. Sending school personnel could be involved in a similar study to assess their opinions concerning student recruitment and selection for area vocational technical schools, since they have a legitimate interest in the schools.

2. A similar study could be conducted in other states to determine if the difficulties expressed by vocational educators in Pennsylvania exist in other states.

3. Research into the readiness of junior high students for making decisions regarding AVTS curricula could be intensified to provide information which could be useful in setting curricular requirements. Such research may provide important data to justify maintaining or adjusting programs.

4. Research could focus on ways to improve the negative attitudes of particular groups toward vocational education.

5. There is a need for research on how in-service programs could be used to increase the knowledgeability of home school personnel regarding vocational education. Such efforts might improve student preparation for career decision-making as well as alter any negative attitudes toward vocational education which may exist.

REFERENCES

American Personnel and Guidance Association. APGA policy statement: Responsibilities of users of standardized tests. In A counselor's guide to vocational guidance instruments, pp. 231-244. Edited by J. T. Kapes & M. M. Mastie. Falls Church, Virginia: American Personnel and Guidance Association, 1982.

Babbie, E.R. Survey research methods. Belmont, California: Wadsworth Publishing Company, 1973.

Barlow, M.L. Burkett- Latest word from Washington. Washington: American Vocational Association, 1977.

Bell, D. Schools in a communal society. In The future of education: Perspectives on tomorrow's schooling, pp. 31-48. Edited by L. Rubin. Boston: Allyn & Bacon, 1975.

Bottoms, G. Flexibility is the key to growth. Voc Ed, 1983, 58, 10-11.

Cook, D. R. Guidance for education in revolution. Boston: Allyn & Bacon, 1971.

Crawford, M. L. Available tests and their use in research in vocational education (Los Angeles Trade-Technical College, 1966). University Park, Pa.: ERIC Document Reproduction Service, ED 012 623, 1966.

Gardner, G. M. The association between local school administrators' and counselors' attitudes toward vocational education and selected characteristics of their students attending a vocational-technical school (Doctoral dissertation, Oklahoma State University, 1972). University Park, Pa.: ERIC Document Reproduction Service, ED 073 259, 1973.

Ghiselli, E. E. The validity of occupational aptitude tests. New York: John Wiley & Sons, 1966.

Ginzberg, E. The development of a developmental theory of occupational choice. In Counseling and guidance in the twentieth century, pp. 61-67. Edited by W. H. Van Hoose & J. J. Pietrofesa. Boston: Houghton-Mifflin Company, 1970.

Ginzberg, E., Ginsburg, S. W., Axelrod, S., & Herma, J. L. Occupational choice: An approach to a general theory. New York: Columbia University Press, 1951.

Glennen, R. E. Guidance: An orientation. Boulder: Pruett Press, 1966.

Green, T. F. Ironies and paradoxes. In Relating work and education, pp. 36-45. Edited by D. W. Vermilye. San Francisco: Jossey-Bass, 1977.

Green, T. F. Work, leisure, and the American schools. New York: Random House, 1968.

Hawkins, L. S., Prosser, C. A., & Wright, J. C. Development of vocational education. Chicago: American Technical Society, 1951.

Herr, E. L. Manpower policies, vocational guidance, and career development. In Vocational guidance and human development, pp. 32-62. Edited by E. L. Herr. Boston: Houghton Mifflin Company, 1974.

Herr, E. L., & Baker, S. B. The development of selection models for Pennsylvania's area vocational-technical schools, Phase 1, Uses of available data. Preliminary final report. University Park, Pa.: The Pennsylvania State University, 1973.

Herzberg, F. Work and the nature of man. Cleveland: The World Publishing Company, 1966.

Herzberg, F., Mausner, B., & Snyderman, B. The motivation to work. Second edition. New York: John Wiley & Sons, 1959.

Holland, J. L. A theory of vocational choice. Journal of Counseling Psychology, 1959, 6, 35-45.

Holland, J. L. Making vocational choices: A theory of careers. Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1973.

Holland, J. L., & Gottfredson, G. D. Predictive value and psychological meaning of vocational aspirations. Journal of Vocational Behavior, 1975, 6, 349-363.

Hoppock, R. Occupational information. New York: McGraw-Hill, 1957.

Hoyt, K. An introduction to career education: A policy paper of the U.S. Office of Education. Washington, D.C.: United States Government Printing Office, 1975.

Isaacson, L. E. Career information in counseling and teaching. Second edition. Boston: Allyn & Bacon, 1971.

Jepsen, D. A. Occupational decision development over the high school years. Journal of Vocational Behavior, 1975, 7, 225-237.

Kapes, J. T. The relationship between selected charactersitics of ninth grade boys and curriculum selection and success in tenth grade. (Pennsylvania Department of Education, Project # 19-1013). University Park, Pa.: The Pennsylvania State University, 1971.

Kohr, R. L. The Likert Attitude Scale Analysis Main Program (contributed program). University Park: The Computation Center, April, 1973.

Leary, M. R., & Altmaier, E. M. Type I error in counseling research: A plea for multivariate analyses. Journal of Counseling Psychology, 1980, 27, 611-615.

McDaniels, C. Touch: Too young to choose? Vocational Guidance Quarterly, 1968, June, 242-249.

National Vocational Guidance Association- American Vocational Association Commission on Career Guidance and Vocational Education. Position paper on career development. Washington: American Personnel and Guidance Association, 1973.

Nelson, A. G. Counseling: Some historical highlights. In Handbook of counseling techniques, p. 4. Edited by E. Harris & P. Schreiber. New York: The MacMillen Company, 1963.

Nie, N. H., Hull, C. H., Jenkins, J. G., Steinbrenner, K., & Bent, D. H. Statistical package for the social sciences. Second edition. New York: McGraw-Hill, 1975.

Parsons, F. Choosing a vocation. Boston: Houghton Mifflin Company, 1909.

Patterson, C. H. An introduction to counseling in the school. New York: Harper & Row, 1971.

Patterson, C. H. Predicting success in trade and vocational school courses: Review of the literature. Educational and Psychological Measurement, 1956, 16, 352-400.

Pennsylvania, Department of Education (Bureau of Vocational Education). Accountability Report, 1982-83: Vocational education programs, services and activities. Harrisburg, 1984.

Pennsylvania, Department of Education. 1983-87 Five year and annual Pennsylvania state plan for vocational education, executive summary. Harrisburg, 1982a.

Pennsylvania, Department of Education. Pennsylvania area vocational-technical school guidance personnel, 1982-83. Harrisburg, 1982b (Mimeographed).

Pershing, J. A., & Schwandt, T. A. Vocational education student recruitment and selection practices in Indiana: Methodology and findings. Bloomington: Indiana University, 1980.

Prediger, D. J., Roth, J. D., & Noeth, R. J. A nationwide study of student career development: Summary of results. Iowa City: American College Testing Program, 1973.

Prediger, D. J., Waple, C. C., & Nusbaum, G. R. Predictors of success in high school level vocational education programs: A review, 1954-1967. Personnel and Guidance Journal, 1968, 47, 137-145.

President is expected to sign vocational education measure. Education Times, October 15, 1984, p. 4.

Pucel, D. Review and synthesis of criteria useful for the selection and admission of vocational students. Information series no. 212, ERIC Clearinghouse on Adult, Career, and Vocational Education. Columbus, Ohio: National Center for Research in Vocational Education, 1980.

Roe, A. The psychology of occupations. New York: John Wiley & Sons, 1956.

Schumacher, E. F. Good work. In Relating work and education, pp. 55-64. Edited by D. W. Vermilye. San Francisco: Jossey-Bass, 1977.

Shellenberger, B. Personal communication. Pennsylvania Department of Education, Bureau of Vocational Education, July 18, 1983.

Shertzer, B., & Stone, S. C. Fundamentals of counseling. Boston: Houghton Mifflin Company, 1968.

Sparks, D. A synthesis of research findings which describe selected benefits and outcomes for participants in vocational education. Washington: Bureau of Occupational and Adult Education, 1977.

Stephens, W. R. Social reform and the origins of vocational guidance. Washington: National Vocational Guidance Association, 1970.

Stock, W. E., & Pratzner, F. C. Review of research on student selection and the prediction of success in occupational education. Minneapolis: Minnesota Research Coordinating Unit in Occupational Education, 1969.

Strahan, R. F. Multivariate analysis and the problem of Type I error. Journal of Counseling Psychology, 1982, 29, 175-179.

Super, D. E. A theory of vocational development. American Psychologist, 1953, 8, 185-190.

Super, D. E. The psychology of careers. New York: Harper Company, 1957.

Super D. E. Vocational development in adolescence and early adulthood: Tasks and behaviors. In Career development: Self-concept theory. New York: College Entrance Examination Board, 1963.

Swanson, J. C. Development of federal legislation for vocational education. Chicago: American Technical Society, 1966.

Teachers claim districts block vo-tech enrollments. The Tribune [Scranton], April 24, 1984, p. 3.

Tilgher, A. Homo faber, work through the ages. Translated by D. C. Fisher. Chicago: Henry Regnery Company, 1965.

United States Congress (94th). Education amendments of 1976 (Public Law 94-482). Washington: U. S. Government Printing Office, 1976.

Warmbrod, J. R. Vocational education: Then and now. Voc Ed, 1981, 56, 29-31.

Whinfield, R. W. A study of the admissions criteria of Connecticut's regional vocational technical schools. Phase 3. Final report. University Park, Pa.: ERIC Document Reproduction Service, ED 223 793, 1982.

Williams, G. D. Student perceptions of occupational congruency. Baltimore: Center for Social Organization of Schools, The Johns Hopkins University, 1973.

Wircenski, J. L. The development and field testing of an objective career counseling instrument. Final report. West Lafayette, Indiana: Purdue University, 1976.

Wirth, A. G. The philosophical split. In Relating work and education, pp. 12-21. Edited by D. W. Vermilye. San Francisco: Jossey-Bass, 1977.

APPENDIX A

QUESTIONNAIRE

QUESTIONNAIRE

Part I

Please answer the following questions as they pertain to your AVTS. Identifying information will be held strictly confidential. Your candid responses are essential.

1. **Type of school:** ____full-time ____part-time

2. **Number of students enrolled:** ____500 or less ____1001-1500
   ____501-1000 ____1501 or more

3. **Type of service area:** ____urban ____rural ____mixed

4. **There is a written policy describing your process of student selection:** ____yes ____no (if yes, please enclose a copy)

5. **Student selection for the AVTS is the responsibility of:**
   ____AVTS counselor ____sending school counselor
   ____AVTS administration ____sending school administration
   ____other (identify _____)

6. **Please indicate the criteria which are used in selecting students for your AVTS. Check those criteria used and indicate the data used to assess the criteria. Also indicate the weight (percentage) assigned to the criteria used:**

(✓)	CRITERION	DATA USED	WEIGHT
	Aptitude		
	Achievement		
	Attendance		
	Interest		
	Recommendation		
	Other		

7. **Students select the AVTS curriculum during:** ____ 8th grade
   ____ 9th grade
   ____10th grade

8. **Tours of the AVTS are made available to the sending schools to acquaint students with AVTS programs:** ____yes ____no

9. **Approximately what percent of your current students visited the AVTS prior to enrolling:** ____25% or less ____51-75%
   ____26-50% ____76% or more

10. **AVTS personnel visit the sending schools to talk to students about AVTS programs:** ____regularly ____rarely ____never

11. **What percentage of students who apply for admission do you enroll:**
    ____25% or less ____51-75% ____26-50% ____76% or more

12. What courses are <u>most</u> requested by prospective students: (list in order of demand)
    1) _____
    2) _____
    3) _____

13. What courses are <u>least</u> requested by prospective students:
    1) _____
    2) _____
    3) _____

14. What do you believe is the major strength of your recruitment and selection process:

15. What, if any, is your major difficulty in recruiting and selecting students:

<u>Part II</u>

Please respond to the following statements according to your level of agreement with the statements. Circle the appropriate response according to the key:

SA - Strongly Agree
A - Agree
U - Uncertain
D - Disagree
SD - Strongly Disagree

1. Students in junior high school are sufficiently knowledgeable about careers to be able to make appropriate career choices . . . . . SA A U D SD

2. Students in junior high school are mature enough to make appropriate career decisions . . . . . SA A U D SD

3. Counselors in junior high school do an adequate job in preparing students for career decisions . . SA A U D SD

4. Sending schools do an adequate job in providing information to students on vocational/technical occupations. . . . . SA A U D SD

5. Academic teachers in junior high school are knowledgeable regarding AVTS curricula . . . . . SA A U D SD

6. Counselors in junior high school have positive attitudes toward the AVTS. . . . . SA A U D SD

7. Administrators in junior high school have positive attitudes toward the AVTS. . . . . SA A U D SD

8. Academic teachers in junior high school have positive attitudes toward the AVTS . . . . . SA A U D SD

9. Academic teachers in senior high school have positive attitudes toward the AVTS . . . . . SA A U D SD

10. Students are strongly influenced by parents in making decisions regarding high school curricula . SA A U D SD

11. Parents have a positive attitude toward their children attending an AVTS . . . . . SA A U D SD

12. Students are strongly influenced by their peers in making decisions regarding high school curricula . SA A U D SD

13. Students who attend an AVTS are well accepted by their academic peers . . . . . SA A U D SD

14. Students who achieve in AVTS programs usually have achieved in previous academic programs . . . . . SA A U D SD

15. Students who have not performed well in academic programs are more attracted to the AVTS than students who have performed well in academic programs . . . . . SA A U D SD

16. Intelligence is the single most important criterion contributing to student success in an AVTS program. . . . . SA A U D SD

17. Motivation is the single most important criterion contributing to student success in an AVTS program. . . . . SA A U D SD

18. Completion of an AVTS program can best be predicted by junior high school attendance . . . . . SA A U D SD

19. School attendance often improves when a student goes from junior high school into an AVTS program. SA A U D SD

20. School attendance remains consistent when a student goes from junior high school into an AVTS program. SA A U D SD

21. Interest inventories are important for AVTS placement. . . . . SA A U D SD

22. Grades assigned in AVTS programs indicate similar achievement to grades assigned in academic programs . . . . . SA A U D SD

23. It is not unusual for students to achieve higher grades in AVTS programs than they achieved in prior academic programs. . . . . SA A U D SD

24. Student selection for the AVTS should be done by AVTS personnel rather than by sending school personnel. . . . . SA A U D SD

25. AVTS programs which are in greatest demand by students are those for which there are the greatest supply of jobs . . . . . SA A U D SD

26. Once a student is enrolled in an AVTS program, course change should be discouraged. . . . . SA A U D SD

27. AVTS teachers are usually willing to accept students who desire to transfer from another AVTS program. . . . . SA A U D SD

28. AVTS programs should be for two years, beginning in eleventh grade. . . . . SA A U D SD

29. There is a need for more research on student recruitment and selection for AVTSs. . . . . SA A U D SD

Part III

The following items are necessary for grouping the preceding data. Please check the item which represents you. As previously stated, identifying information will be held in strict confidence.

1. Position title: _____

2. Years in present position: ____4 or less ____5-8 ____9 or more

3. Sex: ____male ____female

4. Age: ____30 or less ____31-40 ____41-50 ____51 or over

5. Education: (check highest level completed)

____ less than bachelor's degree ____master's degree
____ bachelor's degree ____doctoral degree

Would you like a copy of the abstract of this study: ____yes ____no

THANK YOU VERY MUCH FOR YOUR TIME AND EFFORT

COMMENTS:

APPENDIX B

COVER LETTER TO DIRECTORS

April 13, 1984

Dear AVTS Director:

I am seeking your assistance in a study of student recruitment and selection for AVTSs in Pennsylvania. This study is being done in conjunction with The Pennsylvania State University and the Research Coordinating Unit of the Pennsylvania Department of Education.

As an administrator, I am sure that you share my concern for this vital aspect of the vocational education process.

The enclosed questionnaire should take little time to complete. Your participation is very important. Please respond. Identifying information will be held strictly confidential and your candid responses will be appreciated. Please return the completed questionnaire in the self-addressed, postage-paid envelope by May 3, 1984.

A copy of the abstract of the study will be sent to you if you so request on the last page of the questionnaire.

Also enclosed is a Counselors' Questionnaire that I request be given to the counselor at your school who is most involved with student recruitment and selection.

Thank you for your participation.

Sincerely,

Ed O'Neill
Counselor

APPENDIX C

COVER LETTER TO COUNSELORS

April 13, 1984

Dear Fellow AVTS Counselor:

I asked your director to give you the attached questionnaire because I could not identify the individual most closely involved with student recruitment and selection. Please excuse my not contacting you directly.

I am seeking your assistance in a study of student recruitment and selection for AVTSs in Pennsylvania. This study is being done in conjunction with The Pennsylvania State University and the Research Coordinating Unit of the Pennsylvania Department of Education.

As a counselor, I am sure that you share my concern for this vital aspect of the vocational education process.

The attached questionnaire should take little time to complete. Your participation is very important. Please respond. Identifying information will be held strictly confidential and your candid responses will be appreciated. Please return the completed questionnaire in the self-addressed, postage-paid envelope by May 3, 1984.

A copy of the abstract of the study will be sent to you if you so request on the last page of the questionnaire.

The director of your AVTS has also been asked to participate in this study. The Directors' Questionnaire has an additional part concerned with factual data on the AVTS.

Thank you for your participation.

Sincerely,

Ed O'Neill

APPENDIX D

FOLLOW-UP LETTER TO DIRECTORS

May 11, 1984

Dear

The response to my recent letter regarding a study of student recruitment and selection has been overwhelming. Obviously, there is a shared concern by administrators and counselors as evidenced by both the number of questionnaires returned and the candid responses given.

Unfortunately, I have not received the following from your school:

____DIRECTOR QUESTIONNAIRE
____COUNSELOR QUESTIONNAIRE

If you have recently returned the above, I sincerely thank you for your participation. If you have not returned the above, I respectfully ask that you complete the attached copy and return it in the enclosed self-addressed, postage-paid envelope.

Since this study involves a very select population, your participation is extremely important. Please respond.

Thank you for your participation.

Sincerely,

Ed O'Neill
Counselor

APPENDIX E

COURSES MOST REQUESTED BY PROSPECTIVE STUDENTS

AS REPORTED BY AVTS DIRECTORS

Courses Most Requested by Prospective Students

As Reported by AVTS Directors

Rank[a]	Course	Most Requested (# of directors) 1st	2nd	3rd
1	Cosmetology	36	20	9
2	Auto Mechanics	14	19	18
3	Data Processing	13	9	10
4	Auto Body	3	4	7
5	Carpentry	2	3	12
6	Diesel	2	3	2
7	Building Trades	1	1	1
8	Commercial Art	1	-	-
9	Food Services	-	3	1
10	Electronics	-	2	3
11	Health Occupations	-	2	2
12	Marketing	-	2	-
13	Welding	-	1	3
14	Machine Shop	-	1	1
15	Petroleum Production	-	1	-
16	Residential Construction	-	1	-
17	Electricity	-	-	1
18	Power Mechanics	-	-	1
19	Secretarial	-	-	1

[a]Rank based on number of directors who listed course as most requested.

APPENDIX F

COURSES LEAST REQUESTED BY PROSPECTIVE STUDENTS AS REPORTED BY AVTS DIRECTORS

Courses Least Requested by Prospective Students

As Reported by AVTS Directors

Rank[a]	Course	Least Requested (# of directors) 1st	2nd	3rd
1	Drafting	10	8	3
2	Sheet Metal	5	8	1
3	Air Conditioning	5	5	1
4	Masonry	5	4	1
5	Machine Shop	5	2	4
6	Appliance Repair	4	3	3
7	Warehouse	4	2	1
8	Fashion Design	4	1	2
9	Plumbing	4	-	4
10	Graphic Arts	3	6	6
11	Food Services	3	2	3
12	Health Occupations	3	1	3
13	Agriculture	2	1	1
14	Mechanical Drafting	2	1	1
15	Horticulture	1	7	2
16	Marketing	1	6	3
17	Electronics	1	4	1
18	Building Trades	1	1	8
19	Advanced Office Practice	1	-	1
20	Electricity	1	-	1
21	Civil Technology	1	-	-
22	Foundry	1	-	-
23	Vending Machine Repair	1	-	-
24	Carpentry	-	1	2
25	Painting & Decorating	-	1	1
26	Audio Visual	-	1	-
27	Diesel	-	1	-

Appendix F continued

Rank[a]	Course	Least Requested (# of directors) 1st	2nd	3rd
28	Diversified Coop	-	1	-
29	Ecology	-	1	-
30	Power Sewing	-	1	-
31	Radio & T.V. Repair	-	1	-
32	Welding	-	-	3
33	Chem Tech	-	-	1
34	Commercial Art	-	-	1
35	Dry Cleaning	-	-	1
36	Electro Mechanical	-	-	1
37	Floriculture	-	-	1
38	Upholstery	-	-	1

[a]Rank based on number of directors who listed course as least requested.